



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,559	02/19/2002	Carl B. Freidhoff	2662-140	1467
6449	7590	08/25/2004	EXAMINER	
ROTHWELL, FIGG, ERNST & MANBECK, P.C. 1425 K STREET, N.W. SUITE 800 WASHINGTON, DC 20005			HA, NATHAN W	
			ART UNIT	PAPER NUMBER
			2814	

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/076,559

Applicant(s)

FREIDHOFF, CARL B.

Examiner

Nathan W. Ha

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 and 22-27 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 1-20 and 22-26 is/are allowed.
6) ☒ Claim(s) 27 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/04.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 27 is rejected under 35 U.S.C. 102(b) as being anticipated by Montague et al., US 5,798,283, previously cited, hereinafter, Montague.

In regard to claim 27 (new claim), Montague discloses a method of fabricating a micro-electromechanical system (MEMS) device (e.g. Figures 2-10) comprising the steps of:

forming a control circuit with an actuating element (24) on a substrate 14 (e.g. column 6, lines 8-13);

forming a moving member 26 above the actuating element, for example, see fig. 4 and col.6, lines 13-15, by forming a first sacrificial layer (30) over the actuating element, depositing a conductive material (28) such that the material extends from the circuit to cover the first sacrificial layer, and removing portions of the first sacrificial layer but not between the moving member and the substrate (e.g. column 5, lines 45-46, and fig.11);

Art Unit: 2814

encapsulating the moving member on all sides with a second sacrificial layer (32);

coating the second sacrificial layer with a material (34) that forms an hermetic seal with the substrate;

and removing the first and second sacrificial layers (e.g. Figure 12).

Allowable Subject Matter

3. Claims 1-20 and 22-26 are allowed.
4. The following is an examiner's statement of reasons for allowance:

After carefully reviewed the Applicant's arguments and newly amended claims in paper filed 6/1/04, and updated prior art of record, the Examiner finds that the Applicant's arguments and newly added limitations are reasonable and strongly persuasive. Therefore, they place the above-indicated claims in condition for allowance. The primary reason for the indication of the allowability of the above claims is the inclusion therein, in combination as currently claimed, of the limitation of the use of the sacrificial layer with a first film formed of a material that establishes an hermetic seal with the substrate, wherein the first film has tapered sides. This limitation is found in the above claims and is neither disclosed nor taught by the prior art of record, alone or in combination.

Art Unit: 2814

Response to Arguments

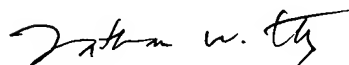
5. Applicant's arguments filed 6/1/04, regarding to claims 1-20 and 22-26, have been fully considered and persuasive. Therefore, as mentioned above, these claims now are in condition for allowance. However, the newly added claim, claim 27, is rejected as addressed above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan W. Ha whose telephone number is (571) 272-1707. The examiner can normally be reached on M-TH 8:00-7:00(EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Nathan Ha
August 17, 2004